

REMARKS

Two months extension for responding to the Office action is requested. A check to cover the corresponding fee payment for the extension is filed herewith. Claim 1 is amended. Claim 12 is amended herein to correct minor informalities objected by the examiner. No new 5 matter is introduced. Claims 1-12 are pending.

Regarding claim objections:

Claim 12 was objected to because of minor informalities. Claim 12 is amended herein to correctly refer to claim 11. No new matter is introduced. It is therefore submitted that 10 claim 12, by this Amendment, overcomes the informality objection.

Regarding 35 U.S.C. § 102(e) rejections:

Claims 1-2, 5 & 9-11 were rejected under 35 U.S.C. § 102(e) as being clearly anticipated by Hembree et al. (U.S. Pat. No. 6,218,848, hereinafter "Hembree"). The 15 rejections are respectfully traversed and reconsideration is earnestly requested.

"A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). "The identical invention must be shown in as complete detail as is contained in the ... 20 claim." *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 1236, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989). The elements must be arranged as required by the claim, but this is not an *ipsissimis verbis* test, i.e., identity of terminology is not required. *In re Bond*, 910 F.2d 831, 15 USPQ2d 1566 (Fed. Cir. 1990).

It is respectfully submitted that **Hembree does not anticipate each and every 25 element as set forth in claims 1-2, 5 & 9-11.** Hembree is distinguished from the claimed invention at least because Hembree does not teach or suggest a probe group having **two or more probes within a guiding boundary** for independently conductively contacting a **single terminal** of a circuit chip, as taught and claimed in the present invention.

Hembree's probe card relies on substrate with contact features. Contacts are 30 disposed on a flat surface, or sculpted surface. By contacting with more than one contact per measured bump/pad Hembree utilizes generally known Kelvin Measurement methods. The

major disadvantage of Hembree is that the source of flexibility comes from an elastomer (flexible membrane 72), not the probe itself.

What is more, in Hembree, the probe contacts 22 and wafer contacts 14 have a one-to-one relationship. For example, the patterns of probe contacts 22 must exactly match the 5 patterns of the wafer contacts 14 [col. 5, lines 41-43]. Further, contacts 22-1, 22-2 are configured to electrically engage wafer contacts 14Vcc-1, 14Vcc-2 one-to-one [FIG. 6A]. Nothing in Hembree teaches or suggests grouping or bundling more than one probe contacts 22 together for independently conductively contacting a **single** wafer contact 14.

Contrastingly, as part of the part of the probe card construction according to the 10 present invention, two or more independent probes are placed into one hole to contact a single terminal [Figs. 2 and 4; Spec. page 9, lines 17-29; Spec. page 13, lines 5-7]. This inventive many-to-one configuration solves the issue of tight pitch and small spacing that two or more independently located probes would have. In the present invention, one larger hole is 15 used so to be able to insert two independent probes necessary for the Kelvin Measurement method. In other words, the present invention solves the issue of how to bring two or more probes into contact with one bump/pad when there is no room for two independent holes and two independent probes. Hembree neither solves nor addresses this issue.

For at least the foregoing reasons, Applicant respectfully submits that the claimed 20 invention is patentably distinct from and not anticipated by the Hembree patent. In particular, independent claims 1 and 11 recite subject matter not reached by the applicable prior art under 35 USC § 102(e). As such, it is submitted that independent claims 1 and 11 25 are patentable and therefore should be allowed.

Reliance is placed on *In re Fine*, 5 USPQ 2d 1596, 1600 (Fed. Cir. 1988) and *Ex parte Kochan*, 131 USPQ 204 (Bd. App. 1960) for allowance of the dependent claims 2-10 and 12, 25 since they differ in scopes from their respective parent independent claims 1 and 11 which are submitted as patentable.

Regarding 35 U.S.C. § 103(a) rejections:

Claims 3 and 12 were rejected under 35 U.S.C. § 103(a) as being unpatentable over 30 Hembree in view of Witt (U.S. Pat. No. 5,136,252). Claim 4 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Hembree in view of Ludwig et al. (U.S. Pat. No.

6,218,846). Claims 6-8 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Hembree in view of Alcoe et al. (U.S. Pat. No. 6,051,982). The rejections are respectfully traversed and reconsideration is earnestly requested.

It is submitted that none of these alleged combinations are applicable to the claimed invention in view of the deficiency of Hembree as discussed heretofore, i.e., Hembree does not teach a bundled probe group having **two or more probes within a guiding boundary** for independently conductively contacting **a single terminal** of a circuit chip. Such deficiency is not cured by any of the cited references.

What is more, notwithstanding the fundamental and patently distinct differences between Hembree and the various secondary references cited and further assuming these alleged combinations are viable, the combinations still do not teach or suggest the present invention as claimed. In particular, the Alcoe et al. patent, contrary to the examiner's statement, does not teach bundled probes in a single perforation (hole). The cited figure 1 of Alcoe et al. shows a row of probe tips 73 positioned for contacting a corresponding row of solder balls 13 in a one-to-one configuration. Figure 23 was cited for a long hole, but there is no figure 23. Col. 6, lines 6 and 35, of Alcoe et al. recite a circular electrically conduction portion of wire 12 inside the electrically insulative outer portion 59 of the probe member 19. As one with ordinary skill in the art would have readily recognized, this circular electrically conduction portion of wire 12 is **not a perforation for the bundled probes** but for the individual probe member 19. Therefore, the combination of Hembree and Alcoe et al., as a whole, does not teach or suggest a probe group having **two or more probes bundled in a single perforation** for independently conductively contacting **a single terminal** of a circuit chip, as taught and claimed in the present application.

Obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988); *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). Since obviousness cannot be established absent some teaching, suggestion or incentive supporting the modification/combination, the examiner has not established a *prima facie* case of obviousness



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MARKED UP VERSION OF THE AMENDED CLAIMS:

1. (Amended) A probe apparatus for testing a circuit chip, said probe apparatus comprising a probe group having two or more probes within a guiding boundary for independently conductively contacting a single terminal of said circuit chip.

12. (Amended) The method of claim [5]11, wherein said contacting is provided by said group including a first, a second and a third of said probes, wherein said recognizing includes recognizing a first, second and a third path resistance corresponding to said first, second and said third of said probes, and wherein said deriving includes deriving an absolute value of a first, second and third operational signal path resistance corresponding to said first, second and said third path resistance.

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